



Building a Digital Library: Lessons Learned

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Agenda



- ❖ Introduction & Background
- ❖ Content & User Requirements
- ❖ Digital Library Architecture
- ❖ Technology & Tools
- ❖ Progress
- ❖ Challenges
- ❖ Lessons Learned
- ❖ Conclusion



Project Background

September 11, 2001



MLW 2003



HSDL Content Scope

- ❖ Macro level
 - ❖ Historical and current debate
 - ❖ Policies
 - ❖ Decisions and issues
 - ❖ Technical and scientific information
 - ❖ Tools to help the first responder
- ❖ Primary emphasis
 - ❖ Support the NPS Homeland Security curriculum
 - ❖ Support NPS research
 - ❖ Support the Mobile Education Teams [METS]
 - ❖ Support the certification program
- ❖ Secondary emphasis
 - ❖ Government agencies [federal, state and local]
 - ❖ First responders
 - ❖ Public



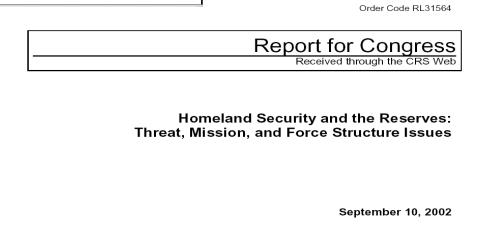
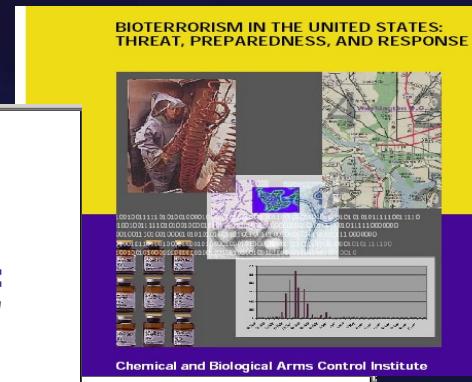
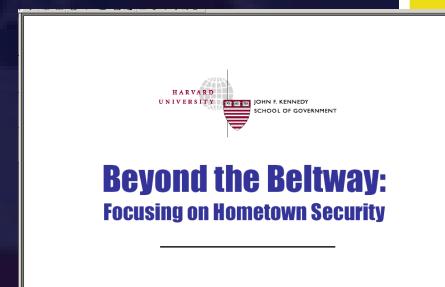
Coverage Levels

- ❖ Comprehensive
 - ❖ As far as reasonably possible, the collection will contain all significant works, regardless of format
- ❖ Research
 - ❖ Contains the major published works required for theses and independent research as well as all important reference works and a wide selection of intellectual content
- ❖ Basic
 - ❖ A highly selective collection which will introduce and define the subject



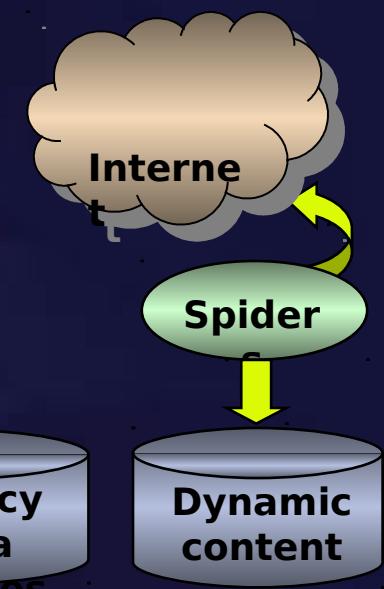
Content Coverage

- ❖ Government documents [federal, state and local]
- ❖ Policies and procedures
- ❖ Research studies
- ❖ Theses and technical reports
- ❖ Case studies
- ❖ White papers
- ❖ Grey literature
- ❖ Public repository materials
- ❖ Legislative materials
- ❖ Agency data sources
- ❖ State and local plans
- ❖ Multimedia materials
- ❖ Commercial database information
- ❖ Think tanks
- ❖ Journal articles
- ❖ Internet sites
- ❖ News
- ❖ Bibliographies
- ❖ Simulations



Types of Content

- ❖ Library catalogs
- ❖ Local content
- ❖ Public repositories
- ❖ Commercial data sources
- ❖ Agency data sources
- ❖ Dynamic content
- ❖ Newsfeeds





Users and Their Requirements

- ❖ NPS personnel [instruction and research]
 - ❖ Course syllabi
 - ❖ Research proposals
 - ❖ Interviews/focus groups
- ❖ METs [executive education]
- ❖ Certification programs
- ❖ Federal, state and local agencies
- ❖ First responders
- ❖ Public

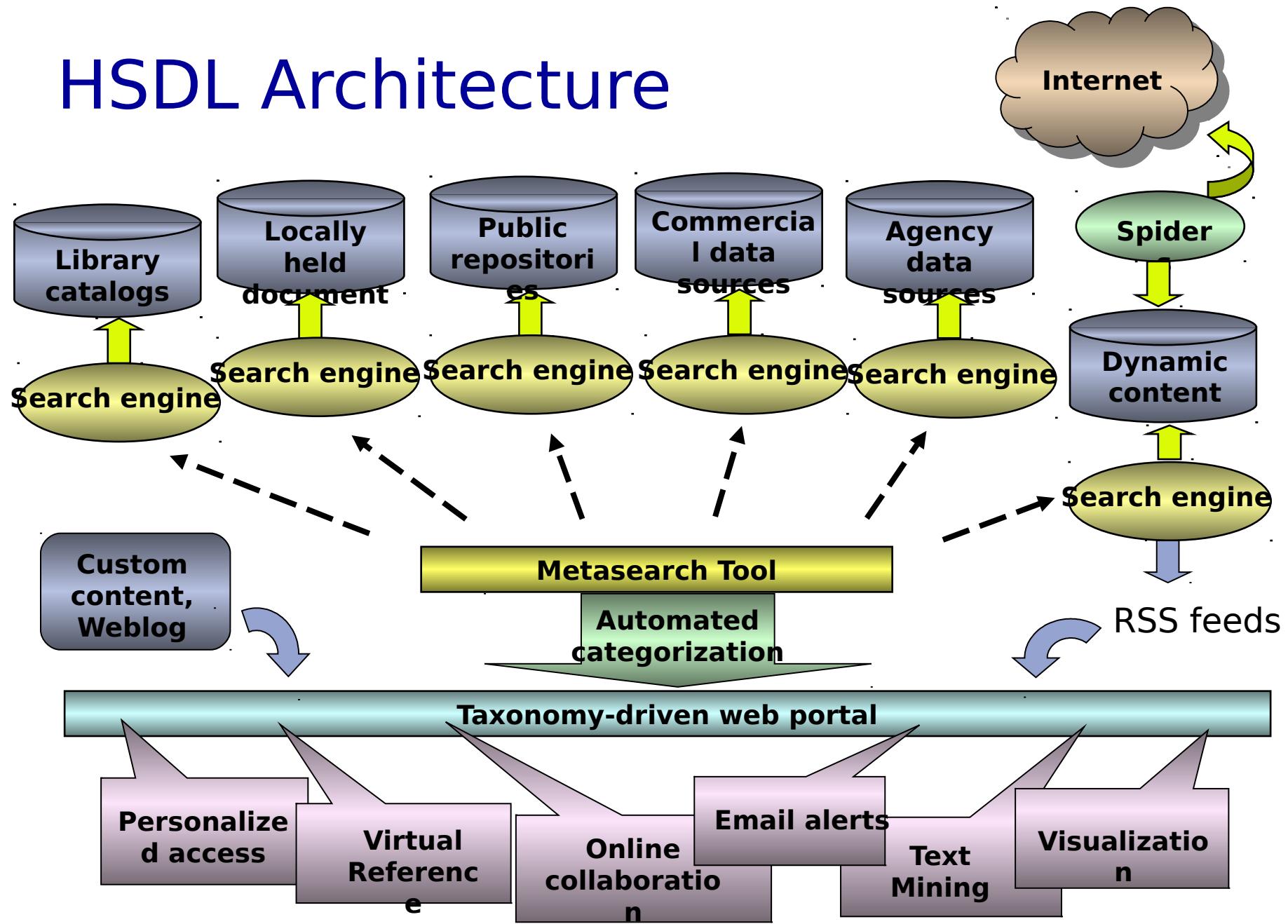


User Analysis & Feedback

- ❖ User analysis
- ❖ Briefings
- ❖ Focus groups
- ❖ Web logs
- ❖ Surveys
- ❖ Informal conversations
 - ❖ Faculty
 - ❖ Students



HSDL Architecture

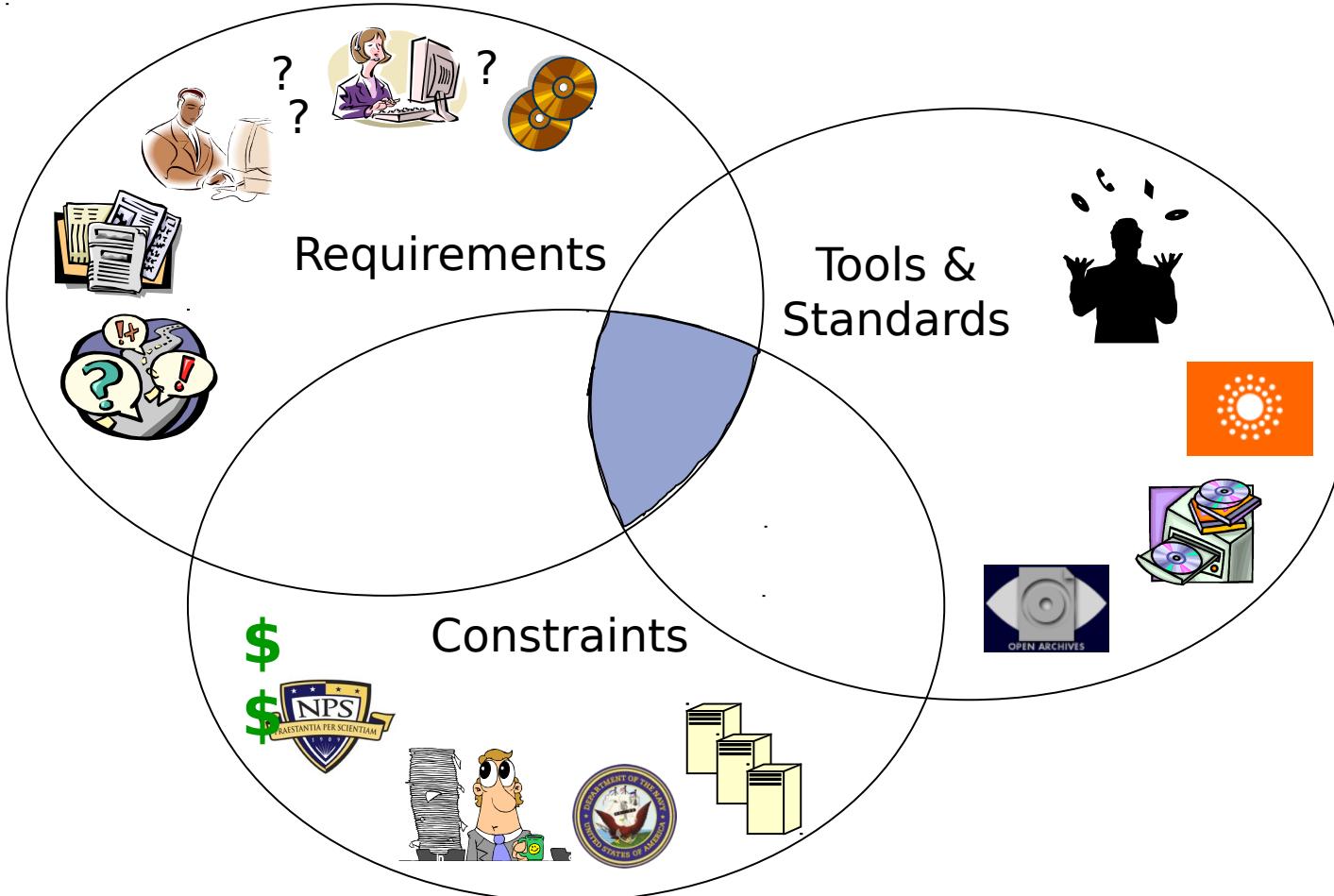




Technologies & Tools

- ❖ XML
- ❖ Metadata
- ❖ Taxonomy
- ❖ Portal technology
- ❖ Virtual reference
- ❖ Online collaboration
- ❖ Federated searching
- ❖ Knowledge management

Matching things up





Status, December 2003

- ❖ Prototype released Sept 26, 2003
- ❖ Access limited to NPS community

Welcome to the *Homeland Security Digital Library*

Homeland Security Digital Library

[HSDL Home](#) [Course Material](#) [Border Management](#) [Civil Military Relations](#) [Emergency Management](#) [Infrastructure](#) [Intelligence](#) [Public Health](#) [Technology](#) [Terrorism](#) [Weapons](#) [Upcoming](#) [About the HSDL](#)

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HS Weblog

- [Free and Secure Trade on Southwest Border](#)
submitted on Sun, 12/07/2003 - 11:50
- [New Anthrax Vaccine on its way](#)
submitted on Fri, 12/05/2003 - 13:42
- [Nuclear weapons and rogue states](#)
submitted on Thu, 12/04/2003 - 14:49
- [Dept. of State launches student web site](#)
submitted on Thu, 12/04/2003 - 14:37
- [SARS Study highlights public health needs](#)
submitted on Thu, 12/04/2003 - 11:23
- [Cutting Chemical Risks for Wastewater Treatment](#)
submitted on Thu, 12/04/2003 - 10:06
- [Military looks to Global Communications](#)
submitted on Thu, 12/04/2003 - 9:06
- [UN Report: Al-Qaida seeks more WMD](#)
submitted on Thu, 12/04/2003 - 7:40
- [NIST issues update on Trade Center Disaster](#)
submitted on Wed, 12/03/2003 - 13:11
- [Fire in the Hole: Nuclear and Non-Nuclear Options](#)
submitted on Wed, 12/03/2003 - 8:54

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Conferences and other Events

2003 | December | [2004 | January | February | March |](#)

U.S. Policy Documents

General

Search the HSDL Database

State Government HS Sites

Choose a State

THREAT ADVISORY

ELEVATED 
Significant Risk of Terrorist Attacks.

HS Related News

[Saudi terror suspects linked to Afghan training camps...](#)
Knight Ridder Washington
Bureau Sun Dec 7 18:04:00 PST 2003

[Rumsfeld flies in...](#)
Courier Mail Sun Dec 7 17:01:00 PST 2003

[Children at play die in US terror chase](#)

Internet



Status, December 2003 (2)

- ❖ Over 500 content modules, incl. news feeds focused on current HS curriculum

Welcome to the *Homeland Security Digital Library*

Border Security

[HSDL Home](#) [Course Material](#) [Border Management](#) [Airport Security](#) [Border Security](#) [Immigration](#) [Maritime & Port Security](#) [Civil Military Relations](#) [Emergency Management](#) [Infrastructure](#) [Intelligence](#) [Public Health](#) [Technology](#) [Terrorism](#) [Weapons](#) [Upcoming](#) [About the](#)

[What's New](#) [Agencies & Orgs](#) [Sites of Interest](#) [Key Documents](#)

[Hearings](#) [Search](#) [Books](#)

Related Information in the HSDL Database

[Go to HSDL Local Database](#)

Terrorism: Automated Lookout Systems and Border Security Options and Issues
Border security and the threat of international terrorism are issues of intense congressional concern, as is evidenced by recent congressional hearings held to examine these issues in the 107th Congre... [Full Record](#)

Enhancing Border Security: Hearing before the Subcommittee on Immigration of the Committee on the Judiciary, United States Senate One Hundred Sixth Congress, Second Session, February 10, 2000
S. HRG. 106-1063: "Today, we will address the issue of enhancing border security. On December 14, 1999, Ahmed Ressam was arrested after attempting to enter Port Angeles, WA. He was found with nitrogly... [Full Record](#)

Technology Assessment: Using Biometrics for Border Security
"Our report starts with a description of the current border control procedures for admitting people into the United States—issuing visas to citizens of other nations and passports to U.S. citizens a... [Full Record](#)

About Border Security

Description
This area provides documents addressing the general concept of border security and U.S. land borders, which includes bridge administration, entry and exit data systems, technology, and key ports of entry. Though areas such as immigration, visas, airports, ships, etc. may be addressed, major related documents will be found in their separate rooms.

Related News

[Saudi-Yemen border is key to terror war...](#) [New York Daily News](#) Sat Nov 29 01:11:00 PST 2003

[Afghan Security Worries Envoy: Incoming U.S. Ambassador Seeks More Vigilance Along Pakistani Border...](#) [Washington Post](#) Tue Nov 18 20:52:00 PST 2003

[Rumsfeld visits Korean border...](#)



Status, December 2003 (3)

❖ Local
repository of
documents &
metadata

HSDL
Homeland Security Digital Library

[Advanced Search](#) [Forums](#) [Home](#)

User Login

Username
Password

Login

[get an account](#)

Search Resources

Search

Help

News & Announcements

No new announcements.
[Previous 20 announcements](#)

New Resources

Analysis for the Homeland Security Act of 2002
The Markle Foundation's overview and section-by-section analysis of the Homeland Security Act of 2002.
http://www.markletaskforce.org/documents/HSA_analysis.pdf [Full Record](#)

Terrorism: Concepts, Causes, and Conflict Resolution
Dr. Stephen Younger, Director of the Defense Threat Reduction Agency, recently lamented that too much effort has been placed on technological solutions to the war on terrorism, stating "this is not a ...
<http://library.nps.navy.mil/homesec/docs/dod/nps11-120203-10...> [Full Record](#)

Community Reaction to Bioterrorism: Prospective Study of Simulated Outbreak
To assess community needs for public information during a bioterrorism-related crisis, an intentional Rift Valley fever outbreak in a community in the southern part of the United States was simulated...
<http://library.nps.navy.mil/homesec/docs/cdc/nps11-120203-08...> [Full Record](#)

New US Strategic Framework and Capabilities-based Planning: Application to Strategic Force Planning: Presented at the US-RU Confidence Building Measures Conference, Garmisch, Germany, 3-4 June 2003
This paper was presented by Systems Planning and Analysis, Inc., at a conference in Garmisch, Germany. The New Strategic Framework announced in the US Quadrennial Defense Review (QDR) has moved force ...
<http://library.nps.navy.mil/homesec/docs/dod/nps11-120203-07...> [Full Record](#)



Status, December 2003 (4)

- ❖ Weblog pushes alerts on new information

HSDL WebLog

Ensured security for media facilities
Submitted by Tracey on 12/09/2003 - 15:36Announcements | Emergency Management

On December 9th, industry leaders from broadcast, cable, and satellite industries adopted 49 best practices to ensure the continued operation and security of media facilities in times of a national emergency. The FCC's Reliability Council (MSRC) also adopted these recommendations. View the recommendations at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-241972A1.pdf

» Tracey's blog | Please login, or register, to add comments.

Diplomatic Readiness Initiative makes difference
Submitted by Tracey on 12/09/2003 - 14:49Other

U.S. Missions worldwide have already benefited from the two-year-old Diplomatic Readiness Initiative, a program for critical positions abroad, including Foreign Service specialists, generalists, and Civil Service employees to develop technical skills. Many of these individuals are serving in locations like Baghdad, Kyrgyzstan, and Turkey, and of post-9/11 tasks. View the entire article at <http://www.state.gov/documents/organization/27107.pdf>

» Tracey's blog | Please login, or register, to add comments.

Dept. of Homeland Security Listo Campaign
Submitted by Tracey on 12/09/2003 - 14:07Emergency Management | Other

On December 8th, the U.S. Department of Homeland Security launched the Listo Campaign, a national public campaign designed to educate Spanish-speaking Americans and residents to prepare for and respond to potential threats. View the press release at <http://www.dhs.gov/dhspublic/display?content=2527> or visit the actual web site at <http://www.listo.dhs.gov>

» Tracey's blog | Please login, or register, to add comments.

Terrorist screening center debuts
Submitted by sallyc on 12/09/2003 - 09:20Announcements

In an effort to better screen suspected terrorists, the intelligence community has enacted the Terrorist Screening Center, which will be administered by the FBI will consolidate terrorist watchlists and will support Federal screeners. Read more click on <http://www.fbi.gov/pressrel/pressrel03/tsctfactsheet091603.htm>

home | archives | user blogs | search | categories | user account

Categories

- Announcements (25)
- Border Management (2)

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HS Weblog

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- [Report highlights terrorist conviction rate](#)
submitted on Tue, 12/09/2003 - 8:17
- [Workshop on Public Safety Communications](#)
submitted on Mon, 12/08/2003 - 13:28
- [Nanotechnology bill signed into law](#)
submitted on Sun, 12/07/2003 - 20:35
- [Free and Secure Trade on Southwest Border](#)
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- [New Anthrax Vaccine on its way](#)
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Conferences and other Events

2003 | December | 2004 | January | February | March | April | May | June | July | August | September | October | November | December



Status, December 2003 (5)

❖ Metasearch engine implemented

HSDL Metasearch

Quick Search Expert Search Help

Search For: As: (Term1)

[More Options >>](#)

Search In:

<input type="checkbox"/> Homeland Security	<input type="checkbox"/> Military/Defense, Political Science	<input type="checkbox"/> Computing & Telecommunications
<input type="checkbox"/> BJA Law Enforcement Training Databases	<input type="checkbox"/> AccessUN	<input type="checkbox"/> CSA: Comp. & Info. Systems Abs. 1981-
<input type="checkbox"/> HSDL Local database	<input type="checkbox"/> CDI: Center for Defense Information	<input type="checkbox"/> CSA: Electronics & Comm. Abs. 1981-
<input type="checkbox"/> Int. Policy Inst. for Counter-Terrorism	<input type="checkbox"/> Center for Nonproliferation Studies databases	<input type="checkbox"/> CSA: Internet & Personal Comp. Abs. 1969-
<input type="checkbox"/> Rand Corporation Publications	<input type="checkbox"/> CSA: World Political Science Abstracts 1975-	<input type="checkbox"/> ProQuest: Telecommunications
<input type="checkbox"/> Transportation Article File	<input type="checkbox"/> Digital National Security Archive	<input type="checkbox"/> Economics, Business and Finance
<input type="checkbox"/> TRIS Database (Transportation)	<input type="checkbox"/> Fed of American Scientists	<input type="checkbox"/> ProQuest: ABI/Inform
<input type="checkbox"/> Technical Reports	<input type="checkbox"/> Janes Online	<input type="checkbox"/> CSA: EconLit
<input type="checkbox"/> CSA: NTIS	<input type="checkbox"/> National Center for Policy Analysis	<input type="checkbox"/> Decisions Sciences Web
<input type="checkbox"/> Dept of Energy Information Bridge	<input type="checkbox"/> SIPRI: Facts on Int. Rel. & Security Trends	<input type="checkbox"/> ECONbase
<input type="checkbox"/> Dryden Technical Report Server	<input type="checkbox"/> STINET, DTIC Tech Reports	<input type="checkbox"/> NBER: National Bureau of Economic Research
<input type="checkbox"/> Glenn Technical Reports	<input type="checkbox"/> US Arms Transfers Database	<input type="checkbox"/> United Nations Economic Commission for Europe
<input type="checkbox"/> Jet Propulsion Lab Tech Reports	<input type="checkbox"/> Emergency Preparedness, Health/Medicine	<input type="checkbox"/> World Bank Publications
<input type="checkbox"/> Lawrence Livermore Nat Lab Docs Online	<input type="checkbox"/> CDC: Public Health Emergency Preparedness & Response	<input type="checkbox"/> Psychology and Social Science
<input type="checkbox"/> NASA Technical Reports	<input type="checkbox"/> CSA: TOXLINE 1994-	<input type="checkbox"/> CSA: Appl. Social Sc. Index & Abs. 1987-
<input type="checkbox"/> National Technical Info Service	<input type="checkbox"/> CSB: US Chemical Safety & Hazard Investigation Board	<input type="checkbox"/> CSA: Social Services Abs. 1980-
<input type="checkbox"/> STINET, DTIC Tech Reports		



Coming Soon ...



- ❖ In progress
 - ❖ Taxonomy on homeland security
 - ❖ Robust portal with personalization
 - ❖ Improved usability
 - ❖ Additional content modules, databases
 - ❖ Targeted newsfeeds
 - ❖ Spidered content
 - ❖ OpenURL-linking to full text content
 - ❖ Branding



Sneak Preview

Production portal expected in March 2004

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US NAVAL POSTGRADUATE SCHOOL

MyHSDL | Browse Library | Browse Courses | Search

Welcome to the Homeland Security Digital Library

A Resources for Faculty, Staff and Students of the Naval Postgraduate School

★ WHAT'S NEW

- [Library closed for Thanksgiving](#)
Sat Nov 22 15:07:00 PST 2003
- [Purdue to Help U.S. Improve Internet Security](#)
Fri Nov 21 12:35:20 PST 2003
- [New translation center will aid intelligence](#)
Fri Nov 21 9:13:08 PST 2003
- [Arson Tracking System \(BATS\) developed](#)
Sat Nov 15 11:29:48 PST 2003

[More...](#)

★ NEWS

- [NYT: FBI Watching War Protesters...](#)
CBS News - Sat Nov 22 15:07:00 PST 2003
- [Bush, Blair Vow to Stay the Course Against Terrorism](#)
VOA - Sat Nov 22 14:35:00 PST 2003
- [Terrorism reportedly thwarted...](#)
USA Today - Sat Nov 22 14:35:00 PST 2003
- [North Korea likens Donald Rumsfeld to Hitler...](#)
ABC Online - Sat Nov 22 13:34:00 PST 2003

[Done](#)

LOGOUT | SITE MAP | FAQ | SEARCH

Homeland Security Digital Library
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MyHSDL | Browse Library | Browse Courses | Search | Help Desk | Ask Librarian | Resources

Home > Browser Library > Library Listings

BROWSE HSDL COURSES

★ GRADUATE SCHOOL COURSES

- [NS 4010: Information Technology for Professionals](#)
- [NS 3028: Contingency Planning for Info Systems](#)
- [NS 3180: Engineering Principles for Info Security](#)
- [NS 4156: Security Self-Assessment for Technology Systems](#)
- [NS 4881: Weapon Systems Technology](#)
- [NS 3210: Secure Interconnections for Technology Systems](#)

[More...](#)

★ ONLINE COURSES

- [NS 4010: Information Technology for Professionals](#)
- [NS 3028: Contingency Planning for Info Systems](#)
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BROWSE LIBRARY

Civil and Military Relations
Directory > Civil Military Relations > Legal Issues

★ RESOURCES

- [Border Management](#)
Subcategory 1, Subcategory 2...
- [Civil Military Relations](#)
Subcategory 1, Subcategory 2...
- [Emergency Management](#)
Subcategory 1, Subcategory 2...
- [Infrastructure](#)
Subcategory, Subcategory...
- [Intelligence](#)
Subcategory, Subcategory...
- [Public Health](#)
Subcategory, Subcategory...
- [Technology](#)
Subcategory, Subcategory...
- [Terrorism](#)
Subcategory, Subcategory...
- [Weapons](#)
Subcategory, Subcategory...

This is an official U.S. Navy web site

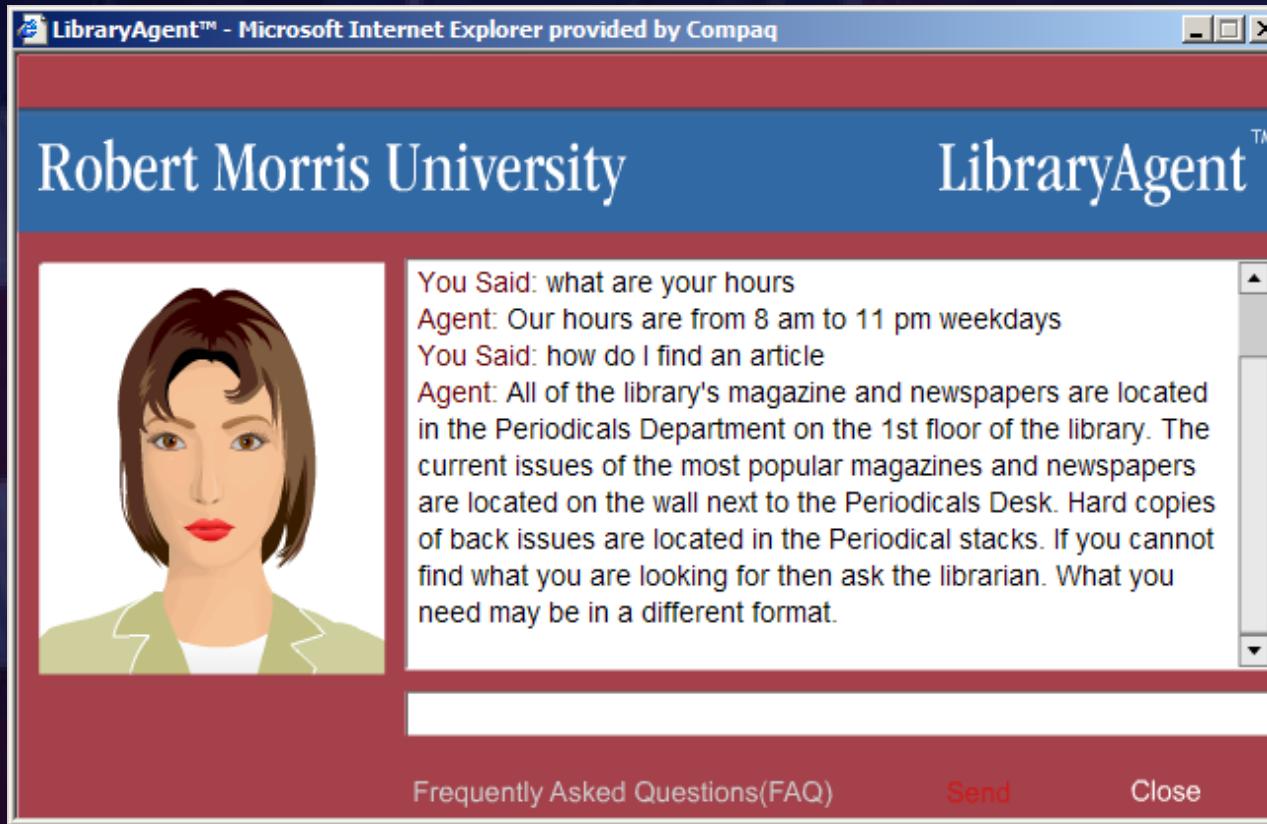
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Beyond March 2004

- ❖ Features planned for Portal Phase 2
 - ❖ Virtual reference & virtual librarian services to enable 24/7 real-time support

<http://www.conversive.com/lib>



A screenshot of a Microsoft Internet Explorer window titled 'LibraryAgent™ - Microsoft Internet Explorer provided by Compaq'. The window displays a chat interface between a user and a virtual librarian named Robert Morris University. The virtual librarian is represented by a female character with short brown hair and red lips, wearing a green blazer over a white shirt. The text in the window shows a conversation where the user asks about library hours and article finding, and the virtual librarian responds with details about the Periodicals Department.

You Said: what are your hours
Agent: Our hours are from 8 am to 11 pm weekdays
You Said: how do I find an article
Agent: All of the library's magazine and newspapers are located in the Periodicals Department on the 1st floor of the library. The current issues of the most popular magazines and newspapers are located on the wall next to the Periodicals Desk. Hard copies of back issues are located in the Periodical stacks. If you cannot find what you are looking for then ask the librarian. What you need may be in a different format.

Frequently Asked Questions(FAQ) Send Close



Beyond March 2004

- ❖ Features planned for Portal Phase 2
 - ❖ Virtual reference & virtual librarian services to enable 24/7 real-time support
 - ❖ Automated categorization of search results
 - ❖ Original articles and reviews
 - ❖ Visualization and text mining
 - ❖ Ontology on homeland security to pave way for application of semantic technologies
 - ❖ Communities of Practice/Collaboration service
- ❖ Access by partners, stakeholders and other federal agencies
- ❖ A public version of the HSDL
- ❖ Digital preservation plan



Challenges

- ❖ Internal
 - ❖ Time
 - ❖ Bureaucracy, esp. in procurement
 - ❖ Staffing & communication
 - ❖ Logistics & equipment
 - ❖ Campus IT infrastructure & support
 - ❖ Funding, balancing requirements
 - ❖ Maintenance & quality control
 - ❖ Management



Challenges (2)

- ❖ External
 - ❖ Getting a handle on user requirements
 - ❖ Opening access to non-NPS users
 - ❖ Mission creep
 - ❖ Defining partnerships
- ❖ Others
 - ❖ Taxonomy development
 - ❖ Aggregation of data & information security
 - ❖ Rights management
 - ❖ Content management
 - ❖ Keep them coming back!



Lessons Learned



- ❖ Project Planning
 - ❖ Focus on user requirements, not technology
 - ❖ Build on small successes, nail milestones
 - ❖ Learn from others
 - ❖ Have a well defined plan
 - ❖ Expect changes & adjust as you go
 - ❖ Expect to make mistakes, have contingencies
 - ❖ Leverage existing resources
 - ❖ Be creative!



Lessons Learned (2)

- ❖ Scope management
 - ❖ Stick to the plan
 - ❖ Include a change process plan
 - ❖ Manage expectations & mission creep
- ❖ People management
 - ❖ Keep tab on staffing issues
 - ❖ Build an effective team
 - ❖ Deal with personnel issues immediately
 - ❖ Develop clear expectations/deliverables



Lessons Learned (3)

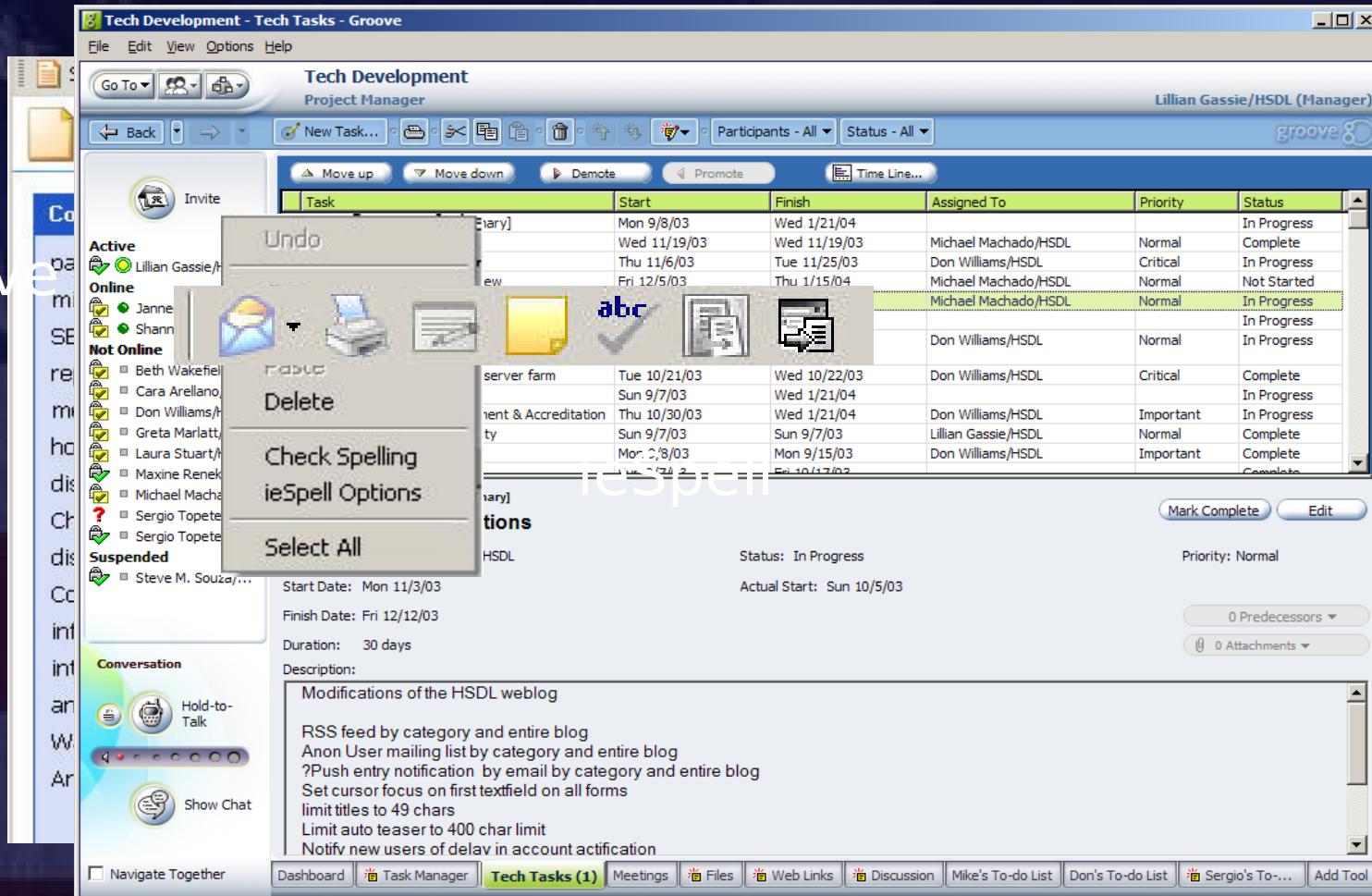
- ❖ Communication management
 - ❖ Deal with communication issues immediately
 - ❖ Pay attention to documentation
- ❖ Time/task management
 - ❖ Balance priorities
 - ❖ Distribute workload accordingly
- ❖ Coordination with others
 - ❖ Determine impact of external requirements
 - ❖ Balance effort with value to mission
 - ❖ Determine what resources are needed



Productivity Tools



Dudley Knox Library



MLW 2003

Conclusion

Success factors

- ❖ Planning & control
- ❖ Flexibility
- ❖ Teamwork
- ❖ Use of appropriate tools
- ❖ Communication
- ❖ Open standards
- ❖ Vision





Building a Digital Library Questions?